

FACT SHEET

Acute Toxicants Chemical Hazards and Risk Minimization

Before starting any work with hazardous materials, review the SDSs of the specific chemicals

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Acute Toxicants

Acute toxicants are chemicals that may cause or are known to cause lethal or significantly toxic health effects.

Section 2 of the Safety Data Sheet (SDS) will contain one or more Hazard Statements describing the nature of the acute toxicant chemical. Examples:

- *Fatal if swallowed*
- *Toxic in contact with skin*

**See the "Hazard Statements" fact sheet for more detailed information

Hazard Communication

The "*Skull and Crossbones*" pictogram identifies substances that may cause:

- **Acute toxicity (fatal or toxic)** - serious adverse health effects (i.e. lethality) occurring after a single or short-term oral, dermal or inhalation exposure to a substance or a mixture.



Handling and Storage Precautions

General risk mitigation measures are as follows:

- Review instructions and precautions provided by the manufacturer/distributor with respect to recommended storage and handling
- Store by hazardous class and in secondary containment. Clearly label storage location and/or secondary containment with hazard class
- Follow general safe chemical handling practices as outlined in the ECU Chemical Hygiene Plan (CHP)
- Observe all specific safety procedures established in the lab safety plans
- Wear appropriate personal protective equipment (PPE) including a closed lab coat, closed heeled/toed, non woven shoes, eye protection, and compatible gloves
- Double glove for highly toxic chemicals
- Substitute for less toxic/hazardous chemicals where possible
- Use chemicals on the smallest scale and concentration feasible
- Restrict the use of highly toxic chemicals to designated work areas and inform all lab users of such hazards
- Consider vented storage, when appropriate

What do I need to know?

- Review instructions and precautions provided by manufacturer/distributor with respect to recommended storage and handling
- Follow general safe chemical handling/storage practices as outlined in the ECU CHP
- Substitute for less toxic/hazardous chemicals where possible
- Use chemicals on the smallest scale and concentration feasible
- Wear proper PPE when handling acute toxicants: ANSI-approved safety glasses, compatible gloves, lab coat, full-length pants, closed-heel and closed-toe shoes

Acute Toxicants

Prudent Practices

Plan for and implement measures designed to eliminate or reduce susceptible routes of exposure:

- Inhalation
 - Use chemical fume hoods when at all possible
 - Keep containers closed when not in use to limit vapor generation
 - Transfer volatile liquids in a manner that limits splashing and mixing with the air
 - Transfer solids, especially powders using spatulas and spoons instead of pouring directly
 - Use wet/damp cleaning methods for solids/dusts - do not dry sweep
- Absorption
 - Remove personal PPE before leaving the work area. Learn how to remove gloves without touching the outside of them with bare fingers, using rolling technique
 - Wash hands or exposed skin after known or suspected chemical contact, after removing PPE, and before leaving the work area.
 - Use gloves that are compatible with the chemical(s)
 - Wear ANSI-approved safety glasses or goggles
- Ingestion
 - Practice strict contamination control, keeping the workplace and floors clean
 - Do not eat, drink, chew gum, apply cosmetics or store such materials in labs
- Injection
 - To the extent feasible, eliminate the use of sharp objects and breakable glass apparatus
 - If it is necessary to use a sharp object, use remote handling devices such as forceps
 - When there is a risk of cuts or sticks, use cut/puncture-resistant gloves
 - Properly dispose of used sharps. Do not re-cap used needles



**See the "Additional Information: Health Hazards, Acute Toxicants, Irritants and Sensitizers" factsheet for labeling and category charts.

Resources

- [GHS Handbook, Revision 7 \(The Purple Book\)](#)
- [GHS Pictogram \(OSHA Quickcard\)](#)
- [Safety Data Sheet Information](#)
- [How to Read a Safety Data Sheet](#)